

- Fig. 13. *Errina (Labiopora) novæ zelandiæ* (facies Benhami). One of the clusters of four grooved spines as seen from above. \times ca. 12 diam.
- Figs. 14 & 15. These two drawings are intended to show the difference in texture between *Errina (L.) novæ zelandiæ* (fig. 14) and *Errina (L.) capensis* (fig. 15), as seen in vertical section of the cœnosteum. Another point of difference between the two specimens is that in the former (fig. 14) the gasteropore penetrates into the depths of the branch and shows a tabula (*t*) in its course; whereas in the latter (fig. 15) the gasteropore ends abruptly a little way below the surface. This difference, however, cannot be regarded as a specific distinction. G, gasteropore; D, dactylo pore; St., style. Both figures \times 35 diam.

54. Descriptions of new Butterflies of the Genus *Thecla* from S.E. Brazil. By E. DUKINFIELD JONES, F.Z.S., F.E.S.

[Received May 13, 1912: Read October 29, 1912.]

(Plate XCVII.*)

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The species described in the present paper were captured by myself and the types are in my own collection.

THECLA HAMILA, sp. n. (Pl. XCVII. fig. 1.)

Allied to *T. gispa* Hew.

Male. Upper side rich purplish blue; costa and termen of fore wings narrowly black, wider at apex; base of costa greenish; a large black silky spot with blue reflection beyond cell; cilia black. Hind wings: costa and termen narrowly black; inner margin greyish black, rather broad at tornus; tails black with white tips; a few white scales on inner side of lobe; some greyish green at tornus above the black margin; submedian hairs greenish blue; head black; thorax greenish blue; abdomen purplish blue. Under side dull stone-green suffused with black, a pale green reflection over all. Fore wings: a medial row of diffused light stone-green spots from costa to vein 2, the spot above vein 3 distal; an indistinct subterminal diffused pale green band; termen black; cilia black with pale green band at apex. Hind wings darker; a broad diffused black medial shade, very dark below costa; a narrow dark postmedial shade and broad subterminal shade; a medial series of green spots between the veins from inner margin to vein 5, those above veins 2 and 3 distal; termen and cilia black.

Expanse 34 mm.

Hab. Castro, Paraná, Brazil.

* For explanation of the Plate see p. 902.



Horace Knight del. et lith.

West, Newman chr.

NEW SPECIES OF THECLA FROM S. E. BRAZIL.

THECLA FANCIA, sp. n. (Pl. XCVII. fig. 2.)

Allied to *T. punctum* H.-S.

Male. Upper side bright metallic blue with a greenish reflection on basal half of wings; costa of fore wings narrowly, apex and termen broadly black; a brown circular brand on upper angle of cell; hind wings outwardly broadly black; tails tipped with white. Under side yellowish grey: fore wings, a postmedial band of indistinct brown lunular spots outwardly bordered with white from costa to vein 2; hind wings: postmedial band inwardly dark brown, outwardly white, angled on veins 1 and 2, inwardly oblique from 3 to 4, placed more distally from 4 to 6 and above 7; a small orange spot at tornus and a larger one between veins 2 and 3.

Expanse 30 mm.

Hab. Castro, Paraná, Brazil.

THECLA SICRANA, sp. n. (Pl. XCVII. fig. 3.)

Male. Upper side dull metallic blue; costa and termen of fore wings narrowly black; submedian hairs on hind wings greyish; tornus dull orange; tails and cilia black tipped with white. Under side bright green; inner margin of fore wings bluish grey; hind wings: an indistinct postmedial series of lunular spots inwardly black, outwardly white; dark red-brown subterminal spots above veins 1, 2, and 3, the one above 2 larger; tornus dark red-brown; cilia black tipped with white. Palpi white with some lateral tawny scales, 3rd joint black; frons brown, with a few metallic green scales; a white point between antennæ; abdomen bluish grey above, white beneath.

Expanse 30 mm.

Hab. Castro, Paraná, Brazil.

THECLA BERTHA, sp. n. (Pl. XCVII. fig. 4.)

Female. Upper side smoky brown, inwardly suffused with bluish grey; fore wings irrorated from median nervure to inner margin with light blue; cilia smoky brown interrupted by white between the veins; in the hind wings the irroration covers the cell also; tornus tawny, with a dark spot on lobe; tails black with white tip; cilia outwardly whitish. Under side bright green; basal half of submedian area of fore wings brownish grey, outer half light grey; a rather broad clear white postmedial band with indistinct dark central line from costa to vein 2; cilia reddish brown, tipped with white between the veins. Hind wings: a nearly straight white medial line defined by maroon on both sides from vein 8 to vein 1, angled inwards at origin of veins 3 and 4, broken at vein 2, being placed more distally below the vein, angled inwardly on submedian fold; a large white spot slightly irrorated with maroon above upper angle of cell; three spots in cell; one spot above vein 2 and one above vein 1; a terminal series of lunular maroon spots irrorated with white, fusing at the veins, the one above vein 2 being produced inwardly,

forming a large maroon spot without irroration; cilia reddish brown, tipped with white between the veins.

Expanse 30 mm.

Hab. Castro, Paraná, Brazil.

THECLA SCHAUSA, sp. n. (Pl. XCVII. fig. 5.)

Male. Upper side: fore wings black; cell and submedian area to near tornus metallic purplish blue; extreme edge of costa tawny; a small dark grey band beyond cell; cilia grey; hind wings metallic purplish blue; costa and apex black; termen narrowly black; tornus tawny red; cilia grey. Under side: fore wings brown; a purplish reflection on medial area below costa; a postmedial wavy dark red line from costa to vein 2; a terminal band of dark red irrorations wide at apex and tapering down to vein 2; termen tawny red; hind wings purplish brown; an inner and a medial line of red irrorations; outer half of wing somewhat greyish, very thickly irrorated with red; a diffused red subterminal band; termen tawny red. Frons tawny red; palpi white mixed with brown; pectus white.

Female. Very similar to the male; the blue of the wings is duller; cilia almost white; termen of hind wings more broadly black.

Expanse, male 17 mm., female 17 mm.

Hab. Castro, Paraná; São Paulo, S.E. Brazil.

THECLA JAPOLA, sp. n. (Pl. XCVII. fig. 6.)

Allied to *T. gaina* Hew.

Female. Upper side dull steel-blue; costa, apex, and terminal area of fore wings broadly greyish black; a dark diffused spot beyond cell; basal half of extreme costa tawny; cilia outwardly brown. Hind wings: costal and terminal areas greyish black, lighter than fore wings; an indistinct subterminal row of dark lunular spots, conspicuous above veins 1 and 2; a red spot on lobe; tails black, tipped with white; termen black, preceded by whitish line; cilia black at base, white at centre, brown at tips. Under side brownish grey; fore wings: an inwardly diffused reddish-brown postmedial band, outwardly white, straight from costa to vein 2; terminal area pale grey with two diffused brown bands, the inner broad, the outer narrow; termen dark brown; cilia light brown; hind wings: an inwardly reddish-brown, outwardly white medial band straight from costa to vein 2, angled on veins 1 and 2 forming a very acute W; terminal area whitish grey with an inner brown band, broad and diffused at costa, narrow and distinct at tornus, bent strongly towards base on inner margin, followed at tornus by orange-red to a black spot on lobe, some white at base of lobe; an orange-red lunular spot with black point above vein 2; termen dark brown; cilia lighter with pale band.

Expanse 28 mm.

Hab. Castro, Paraná, Brazil.

THECLA FERNANDA, sp. n. (Pl. XCVII. fig. 7.)

Allied to *T. nubilum* H. H. Druce.

Male. Upper side dark blackish brown; a red spot on lobe and a few white scales at tornus; tails black tipped with white. Under side yellowish grey-brown; fore wings: a dark postmedial band outwardly bordered with white, nearly straight from costa to vein 2; hind wings: postmedial band inwardly shaded with red and outwardly with white, angled on veins 1 and 2, proximate between veins 3 and 4, straight from 4 to 7, distal above 7 forming conspicuous spot at costa. Differs from *T. nubilum* in the band on fore wing being straighter, that on the hind wing less acutely angled on veins 1 and 2 and in the distal spot at costa, also in absence of discocellular bar.

Expanse 29 mm.

Hab. Fernandes Pinheiro, Paraná, Brazil.

THECLA NORA, sp. n. (Pl. XCVII. fig. 8.)

Male. Upper side dark metallic lilacine blue; costa and termen of fore wings narrowly black, broader at apex; a large black band beyond celi; cilia black at base, whitish metallic blue at tips; hind wings: costal area greyish brown; a fine black terminal line; cilia black with bluish-white band. Under side brownish grey; fore wings suffused with steel-blue on submedian area; postmedial band inwardly dark brown, outwardly white from costa to vein 3, below vein 3 the brown changes to blue; a very indistinct subterminal line, inwardly white, outwardly brown; cilia brown; hind wings: postmedial band dark brown, shaded inwardly with orange and outwardly with white, strongly angled on veins 1 and 2, outwardly displaced between 4 and 5; a series of subterminal lunular spots shaded inwardly with white, followed by orange spot at tornus, a dark spot irrorated with white below vein 2 and an orange spot containing black point below 3; a narrow white terminal line; cilia dark brown with bluish-white tips.

Expanse 24 mm.

Hab. Castro, Paraná, Brazil.

THECLA MOLENA, sp. n. (Pl. XCVII. fig. 9.)

Closely allied to *T. lemona* Hew.

Male. Upper side dull dark metallic blue; fore wings: outer half of costa, apex and termen black; a large oval black band, crossed by blue discocellular bar; extreme costa tawny at base; hind wings: termen narrowly black; tails black tipped with white; a red spot on lobe. Under side brown with a lilacine reflection on terminal area of fore wings and the whole of the hind wings. The bands and lines are much the same as in *T. lemona*, but they are much more diffused and subdued; this difference and the lilacine reflection readily distinguish the species. *T. lemona* is also a larger insect than the present.

Female. Upper side brown, suffused with lilacine on basal area. Under side as in male, but the lilacine reflection is much less pronounced.

Expanse, male 24 mm., female 24 mm.

Hab. Castro, Paraná, Brazil.

THECLA ESMERALDA, sp. n. (Pl. XCVII. figs. 10, 11.)

Close to *T. janias* Cr., but differs in the very much wider black margins of the upper side and in the postmedial line, and in the orange spot in place of the black spot on the under side in *janias*.

Male. Palpi and head vivid metallic green; legs green; tarsi inwardly whitish and banded with black; thorax, abdomen, and wings rich purplish blue. Fore wings broadly bordered with black on costa and termen, very broad at apex; a small circular dark grey band. Hind wings broadly black on costal and apical areas, narrowly from vein 4 to tornus; a green spot on the black at tornus; tails black tipped with white. Under side: fore wings vivid metallic green, inner margin grey; cilia brown: hind wings vivid metallic green; a fine black wavy postmedial line, most distinct at inner margin; some lunular subterminal spots near tornus, that above vein 2 being bright orange; some white scales at tornus.

Female. Thorax green; wings and abdomen brown, with slight lilacine grey tint on hind wings and basal half of fore wings. Under side as in male, but the postmedial line clearer and the orange spot above vein 2 much larger, there is also some orange at tornus; cilia inwardly black, outwardly whitish.

Expanse, male 27 mm., female 25 mm.

Hab. Castro, Paraná, Brazil.

THECLA CASTRENA, sp. n. (Pl. XCVII. figs. 12, 13.)

Allied to *T. phrosine* H. H. Druce.

Male. Upper side dark blackish brown; a few lilacine scales at base and along inner margin of fore wings; a slight lilacine reflection on hind wings; termen dark and cilia white in both wings. Under side: fore wings pale lilacine blue; apex and inner margin whitish; a lilacine reflection over the whole; a medial V-shaped mark on submedian fold; a slightly wavy red-brown postmedial band from costa to vein 2, followed by white spot above vein 6; a fine black terminal line, becoming brown at apex; cilia white at tornus, shading to brownish at apex. Hind wings white with lilacine reflection; a bright orange-tawny irregular postmedial band of elongated spots, placed distally below veins 1, 3, 5, 6 and 8, and proximally below 2, 4 and 7; a sub-terminal row of minute tawny and black spots between the veins; a fine black terminal line, shading to brown at tornus; cilia white.

Female. Upper side the same as the male, except that the cilia

are brown. Under side yellowish grey, the hind wings lighter than fore wings; bands as in male, but the postmedial is outwardly shaded with white and there is a subterminal series of red spots from vein 2 to 6; termen brown; cilia brown: on the hind wing the subterminal spots are much larger than in the male, termen brown, inwardly shaded with white, cilia greyish white.

Expanse, male 25 mm., female 24 mm.

Hab. Castro, Paraná, Brazil.

THECLA CAMPA, sp. n. (Pl. XCVII. fig. 14.)

Near *T. biblia* Hew.

Male. Upper side dull blackish blue, shading to black on outer half of fore wings; cilia brown; hind wings; termen narrowly black; fringe of abdominal fold white; cilia black, with white band at tornus, outwardly brown at apex. Under side light green with a light lilacine-blue reflection; cilia of fore wings light brown; hind wings: an obscure greyish-white discocellular bar; an obscure sinuous greyish-white postmedial line, more clearly defined from inner margin to vein 3; a black spot at tornus with some white scales above and below it; a minute black point below vein 2 and a small orange-red spot ringed with black below vein 3; termen near tornus bluish white. Palpi white with green reflection, third joint black above, white beneath; frons metallic green; back of head and tegulae dark brown; eyes surrounded with white; body blue-black above, creamy white beneath.

Expanse 22 mm.

Hab. Castro, Paraná, Brazil.

THECLA DATITIA, sp. n. (Pl. XCVII. fig. 15.)

Very near *T. tadita* Hewitson, but differing from it in the possession of tails, the narrow black margins on upper side of the hind wings, and in the terminal rows of lunular spots and the black spots on the under side of the hind wings.

Male. Upper side: fore wings smoky black; a very dark medial suffusion from costa to vein 2; outer two-thirds of cell filled with raised brown scales; a submedian patch of lilacine blue from base to near tornus; termen dark; cilia greyish; hind wings lilacine blue, broadly black on costa and apex; a series of diffused black subterminal spots, confluent below apex; termen dark; cilia greyish; tails dark with white tips. Under side grey with light brown bands. Fore wings: a light brown discocellular bar; a well-defined light brown postmedial band, diffused on inner side; a narrower and wavy subterminal band followed by a row of diffused spots; termen light brown; cilia grey at base, brown at tips. Hind wings: base light brown irrorated with grey; a light brown discocellular bar; a dark narrow postmedial band, diffused on inner side and followed by

narrow grey line and broad light brown suffusion; a medial spot ringed with grey at costa; a terminal series of diffused lunular spots, containing a black spot above vein 2.

Expanse 23 mm.

Hab. Fernandes Pinheiro, Paraná, Brazil.

EXPLANATION OF PLATE XCVII.

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| Fig. 1. <i>Thecla hamila</i> ♂. | Fig. 9. <i>Thecla molena</i> ♂. |
| 2. " <i>fancia</i> ♂. | 10. " <i>esmeralda</i> ♂. |
| 3. " <i>sierana</i> ♂. | 11. " " ♀. |
| 4. " <i>bertha</i> ♀. | 12. " <i>castrena</i> ♂. |
| 5. " <i>schausa</i> ♂. | 13. " " ♀. |
| 6. " <i>japola</i> ♀. | 14. " <i>campa</i> ♂. |
| 7. " <i>fernanda</i> ♂. | 15. " <i>datitia</i> ♂. |
| 8. " <i>nora</i> ♂. | |

55. The Bornean Bantin.

By R. LYDEKKER, F.R.S., F.Z.S.*

[Received October 1, 1912: Read October 29, 1912.]

(Text-figures 123-125.)

That the Bantin of Borneo should be subspecifically distinct from the typical *Bos sonduicus* of Java is what might naturally be expected, and the only wonder is that its distinction has not long since been recognized and a name assigned to the local race. This, however, is not improbably due to the fact that, so far at least as this country is concerned, the Javan Bantin is an exceedingly rare animal in museums, the only complete adult example in the British Museum (Nat. Hist.) being the mounted skin of a bull obtained by exchange with the Leiden Museum in 1846, and now, as might have been expected after long and unprotected exposure in the galleries at Bloomsbury, in an exceedingly dilapidated condition. The Museum also possesses a fine mounted head of a bull, presented in 1904 by Baron L. T. H. van Heckeren-tot-Walien; and also the skeletons of a bull and cow, with the horns, obtained from Leiden at the same time as the mounted skin, the skull of the former being exhibited in the Pavilion at the further end of the Lower Mammal Gallery. In addition to these is the mounted skin of an immature male, and also a young skull, with horns—from the Lidth de Jeude collection—both of which present all the characteristics of the Javan race.

On the other hand, the Museum has a considerable series of skulls and horns of the Bornean Bantin presented by Mr. H. B. Low in 1880 and 1887, as well as two presented by Mr. W. B. Pryer in 1886, all these being from North Borneo. Sir Edmund Loder also possesses at least two frontlets and

* By permission of the Trustees of the British Museum.

horns of subadult Bornean Bantins in his private museum at Leonardslee.

As regards the colour of the Bornean Bantin I know nothing definite; but, in the absence of any statement to the contrary, I presume it is approximately similar to that of the typical Javan race; that is to say, adult bulls are blackish brown or black with a large white rump-patch and white "stockings," while the cows and young bulls have the dark area rufous or chestnut.

In all the above-mentioned Javan specimens in the Museum the horns are of the type of those shown in text-fig. 123, which

Text-fig. 123.



Skull and horns of male Javan Bantin (*Bos sondaicus*) in the British Museum.

represents the skull of a bull obtained from Leiden in 1846. At their origin the horns are directed mainly outwards, but at rather more than half their length they curve suddenly inwards with a somewhat forward and finally a backward inclination. This

causes them to have a relatively large maximum span and a correspondingly small tip-to-tip interval, as is indicated in the table of measurements given below. In consequence, I take it, of the outward and somewhat backward direction of the basal portion of the horns, the frontal region of the skull is somewhat convex, while the intercornual ridge has a distinct prominence in the middle line.

Text-fig. 124.



Skull and horns of male Bornean Bantin (*B. sondaicus lowi*), from the Rejang Valley, in the British Museum.

In the Bornean Bantin, as typified by the largest of the skulls presented by Mr. Low to the British Museum (text-fig. 124), the horns, which are relatively stouter, are less curved and have a